TRAFFIC IMPACT ANALYSIS

For:

Route 67 Self-Storage

(APN 392-070-02)

R08-001, P08-002, ER08-14-001

Prepared by:

RCE **Traffic and Transportation Engineering**
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(619) 589-9151

October 30, 2008

1.0 INTRODUCTION

This Traffic Impact Analysis was prepared by ***RCE*** to evaluate the potential traffic and circulation impacts related to the development of the Route 67 Self Storage. The proposed site is located on the north side of Lakeside Avenue, west of State Route (SR) in the unincorporated area of Lakeside in the County of San Diego.

1.1 PROJECT DESCRIPTION

The project proposes to construct a 37,676 square foot, three story, mini-storage building on a 2.16 acre parcel located at 12410 Lakeside Avenue. The site currently contains one single family residence, which will be removed. Please refer to the Site Plan (Figure 1)

The project is requesting a rezone from A70 (Limited Agriculture) to RR (Rural Residential). The proposed use of "mini-storage" is allowed in the RR zone and is in compliance with the County General Plan with the requested rezone and Major Use Permit (MUP) allowing mini-storage.

The Sandag land use of "Industrial, Storage" was used to determine the potential traffic generation of the proposed development. The development of this project is estimated to generate a net total of 63 weekday trips with 3 and 5 vehicles per hour being generated during the morning and afternoon peak hour on the adjacent roadways, respectively.

Access to the site will be through two driveways proposed on Lakeside Avenue.

1.2 STUDY AREA

Because this project is estimated to generate less than 100 average daily trips (ADT), based on County Criteria, this analysis will focus on the adjacent segment of Lakeside Avenue and the intersection of Lakeside Avenue & SR-67.

2.0 EXISTING TRAFFIC CONDITIONS

The following is an assessment of the existing conditions of the roadway network adjacent to the project relevant to this study.

2.1 EXISTING CIRCULATION NETWORK

Access to the study area is provided by the following facility:

Lakeside Avenue – is a circulation element roadway classified as a "Light Collector" in the County of San Diego's General Plan. Currently, the road is constructed with two lanes on pavement widths of approximately 25 to 30 feet adjacent to the project site. This section of Lakeside Avenue has a posted speed limit of 40 MPH.

2.2 EXISTING TRAFFIC VOLUMES

Existing peak hour turning volumes for the study area intersection (May 2006) and ADT for Lakeside Avenue adjacent to the project site (July 2007) were obtained from traffic counts performed by Southland Car

Counters.

Refer to figure 1 for existing traffic volumes. Count sheets are located in Appendix A

2.3 LEVEL OF SERVICE METHODOLOGY

The Level of Service (LOS) is a qualitative measure used to describe the operational conditions within a traffic stream, and a motorist and/or passenger's perception of the performance of the roadway. LOS is designated a letter from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS C is typically used as a design standard, while LOS D is considered acceptable for peak period operating conditions by most jurisdictions.

2.3.1 ROADWAY LEVEL OF SERVICE

Circulation element roadways within the study area were evaluated using the County of San Diego's daily level of service volume table. This methodology compares daily traffic volumes to roadway classifications to determine the approximate daily street segment level of service. This methodology is based on generalized assumptions regarding roadway design and traffic compositions and often does not accurately reflect peak hour operating characteristics. It is intended to be used as a guide to help determine roadway classifications and sizing.

2.3.2 INTERSECTION LEVEL OF SERVICE

Intersection levels of service were evaluated using the 2000 Highway Capacity Manual methods for signalized and unsignalized intersections. The University of Florida Transportation Research Center's Highway Capacity Software program was used in analyzing the intersections within the study area. The County of San Diego has set standards for adequate traffic flow through an existing intersection or roadway segment at LOS D or better. If the delay along an existing roadway or intersection declines to LOS E (unstable flow) or worse, it is considered an unacceptable condition by the County.

2.4 ANALYSIS OF EXISTING TRAFFIC CONDITIONS

2.4.1 ROADWAY SEGMENTS

Existing weekday traffic volumes (ADT) shown for Lakeside Avenue were compared to the County's capacity standards to determine the levels of service for the circulation element roadway segments. The County's capacity standards are based on average daily traffic on the facility. This analysis reveals that Lakeside Avenue within the study area operates at LOS B based on the County's LOS tables.

2.4.2 INTERSECTIONS

NON-SIGNALIZED INTERSECTIONS:

This analysis shows that the non-signalized intersection of Lakeside Avenue & SR-67 area currently operates at LOS F during the AM Peak and LOS C during the PM peak. The eastbound left turn from Lakeside Avenue to northbound SR-67 is the critical move which caused the intersection to operate at unacceptable levels during the AM peak hour. See Appendix B for LOS calculations.

3.0 EXISTING PLUS PROJECT TRAFFIC CONDITIONS

To properly evaluate the traffic impacts of this project on the existing roadways, the amount of traffic generated by the project must be estimated and distributed over the study area street system. Section 3.1 describes the methods and assumptions used to forecast project generated traffic volumes. Section 3.2 describes the analysis and results to determine the project impacts on the existing streets.

3.1 PROJECT-GENERATED TRAFFIC VOLUMES

3.1.1 PROJECT TRAFFIC GENERATION

This project proposes to construct a 37,676 square foot mini-storage and remove one existing residence. The Sandag land use of "Industrial, Storage" was used to determine the potential traffic generation of the proposed development.

Proposed Development:

Per Sandag:	ADT = 2 trips/1000s.f.	X	37,676	=	75 ADT
	AM peak = 6% (5:5)			=	4 (2:2)
	PM peak = 9% (5:5)			=	6 (3:3)

Existing Site:

Per Sandag	ADT = 12 trips/dwelling unit	X	1	=	12 ADT
(Residential, Estate)	AM peak = 8% (3:7)			=	1 (0:1)
	PM peak = 10% (7:3)			=	1 (1:0)

Net Traffic Generation:

ADT = 75 – 12			=	63 ADT
AM peak = 4 (2:2)	-	1 (0:1)	=	3 (2:1)
PM peak = 6 (3:3)	-	1 (1:0)	=	5 (2:3)

The development of this project is estimated to generate a net total of 63 new weekday trips with 3 and 5 vehicles per hour being generated during the morning and afternoon peak hour on the adjacent roadways, respectively. Sandag also uses a trip generation rate based on the number of storage vaults (0.2 trips/vault). Estimates calculated approximately 318 vaults for this project. Calculations reveal a decrease in net trips from 63 ADT to 52 ADT. Since this is only an estimate at this point, we have used the larger value of 63 ADT in this analysis to be conservative.

3.1.2 PROJECT TRAFFIC DISTRIBUTION

To properly evaluate impacts of the project to the surrounding street system, it is necessary to distribute project generated traffic in a manner consistent with the surrounding land uses and anticipated origins and destinations.

Figure 2 shows the distribution of project generated traffic onto the surrounding roadway system.

3.2 EXISTING PLUS PROJECT IMPACTS

3.2.1 ROADWAY SEGMENTS

Lakeside Avenue will continue to operate at LOS B within the study area based on the County's capacity standards with the addition of project traffic volumes. Per the County's "Guidelines for Determining Significance(revised effective December 5, 2007) this does not constitute a direct impact to the adjacent roadway.

Table 1 – Street Segments

Segment	Existing Volume	Existing LOS	Existing + Project Volume	Existing + Project LOS
Lakeside Avenue	3,640	B	3,703	B

3.2.2 INTERSECTIONS

NON-SIGNALIZED INTERSECTIONS:

Per the County's "Guidelines for Determining Significance", the traffic generated by this project will not constitute a direct impact to the Lakeside Avenue & SR-67 intersection. The project will not add 5 peak hour trips to a critical move of the intersection.

Table 2 - Intersections

Non-Signalized Intersection	Existing LOS		Existing + Project LOS	
	AM	PM	AM	PM
SR-67 & Lakeside	F	C	F	C
Lakeside & Westerly dwy	A	B	A	B
Lakeside & Easterly dwy	-	-	B	A

4.0 EXISTING PLUS CUMULATIVE CONDITIONS

The County of San Diego Board of Supervisors approved an updated Traffic Impact Fee program on January 30, 2008 to mitigate cumulative impacts to roadway facilities. The developer of this project will participate fully in the County's TIF program to mitigate any potential cumulative traffic impacts to TIF facilities. Since intersection of SR-67 & Lakeside Avenue is not a TIF facility and the project is anticipated to have cumulative impacts to the intersection, the developer has agreed to pay a fair share towards signalization of this intersection per a signal fee/J-25 contribution. This fee is calculated by County staff at $620.

5.0 PROJECT IMPACTS

Roadway Segments:

Based on the guidelines set forth in the County of San Diego's "Guidelines for Determining Significance", direct or cumulative impacts would occur when the significance criteria outlined are exceeded. In this case, this project will have no direct impacts to the study area roadway segments.

Intersections:

Based on the guidelines set forth in the County of San Diego's "Guidelines for Determining Significance", direct or cumulative impacts would occur when the significance criteria outlined are exceeded. In this case, this project will have no direct impacts to intersections in the study area.

TABLE 3: Street Segment Impact Summary

Segment	Road Classification	Road Capacity (LOS E)	Exist. Volume	Exist.	Project Traffic	Existing + Project	Direct Impact
				LOS		LOS	
Lakeside Avenue	Light Collector	16,200	3,640	B	63	B	No

TABLE 4: Intersection Impact Summary

Intersection	Existing + Project					
	AM			PM		
Non-signalized	LOS	Trip Increase	Impact	LOS	Trip Increase	Impact
SR-67 & Lakeside Ave	F	1	No	C	2	No
Westerly Dwy & Lakeside Ave	A	1	No	B	2	No
Easterly Dwy & Lakeside Ave	B	1	No	A	1	No

Notes: "Trip increase" shown is the increase in peak hour trips on a critical movement.

6.0 PROPOSED MITIGATION MEASURES

DIRECT IMPACTS:

As outlined in the above tables, the addition of project generated trips to the surrounding roadways will have no direct impacts to existing roadway segments and intersections. Therefore, no mitigation measures are required with this project for direct impacts.

CUMULATIVE IMPACTS:

The County of San Diego has adopted a Transportation Impact Fee (TIF) for projects throughout the County of San Diego area to improve certain circulation element roadways. Payment of this TIF is intended to mitigate cumulative impacts caused by new developments.

The developer of this project has agreed to pay the appropriate TIF fees which will provide appropriate mitigations for cumulative impacts outside the project study area. Since intersection of SR-67 & Lakeside Avenue is not a TIF facility and the project is anticipated to have cumulative impacts to the intersection, the developer has agreed to pay a fair share towards signalization of this intersection per a signal fee/J-25 contribution. This fee is calculated by County staff at $620.

7.0 ADDITIONAL ITEMS ANALYZED

7.1 Project Access & Frontage Improvements

Frontage improvements on Lakeside Avenue include construction of concrete curb, gutter and sidewalk with a pavement width of 25 feet from centerline. Please see the Site Plan (Figure 1) for details and the Preliminary Striping Plan (Figure 5) for proposed striping modifications along the project frontage.

Access to the project site is proposed via two driveways onto Lakeside Avenue. The driveways will be gated on-site appropriate to allow vehicles to enter the driveways without causing backups or disruption of traffic flows along Lakeside Avenue. Two driveways are required for site circulation and by the Fire District to provide fire access. The westerly driveway will also provide access to three existing single family dwellings located adjacent to the site. Because of the relatively low anticipated left-turning volumes into the site (1 vehicle per hour), the project does not propose left turn pockets on Lakeside Avenue.

The County of San Diego's Public Road Standards have a minimum distance between Non-Circulation Element roads (driveways) entering a Circulation Element roads (Lakeside Avenue) of 300 feet. Because of the need for two driveways for site circulation and fire access, this minimum cannot be accomplished. A design exception will be processed to address this issue.

7.2 Corner Sight Distance

Field reviews revealed that the proposed driveways are estimated to have the following corner sight distances:

Westerly driveway: 500' looking west, 510' looking east
Easterly driveway: 318' looking west, 345' looking east.
A speed zone study was performed on 10/23/08 to determine the 85th percentile speeds approaching the driveways. The results are as follows:

Westbound traffic	-	45MPH
Eastbound traffic	-	44MPH

Per Table #5 of the County Public Road Standards, the desired corner sight distance is 450' for these speeds. The westerly driveway has adequate corner sight distance.

Table 201.1 of the Caltrans Highway Design Manual defined stopping sight distance for these speeds at 360'. It should be noted that stopping sight distance and corner sight distance are measured from different locations and typically have different values. The values for stopping sight distance for the easterly driveway are as follows:

Looking East	-	360'
Looking West	-	300'.

The easterly driveway has adequate stopping sight distance looking east, however does not have adequate stopping sight distance looking west due to the fence location along the roadway on the south side of Lakeside Avenue. This impacts traffic exiting the site and turning left. As a result, we recommend that the

westerly driveway be restricted to "right turn only" for traffic exiting the site.

7.3 Construction Impacts

The project is anticipated to require the export of approximately 6,800 cubic yards of soil. This calculates to 453 truckloads with 4 trucks per hour. The export process is anticipated to require approximately 14 working days. Truck access will be controlled by flagmen and advanced warning signs on Lakeside Avenue per County of San Diego standards. Once trucks have entered the public roadway, they will proceed on public streets to the import site. The location of the import site has not been determined at this time.

7.4 Year 2030 Impacts:

The rezone request is from the current A70 (Limited Agriculture) to RR (Rural Residential). The proposed use of "mini-storage" is allowed in the RR zone and is in compliance with the current General Plan, therefore no increase in anticipated traffic generation is proposed with this use.

8.0 CONCLUSIONS

It is recommended that the following traffic related improvements be made conditions of approval for development of this project:

1. Pay appropriate Transportation Impact Fee (TIF) to mitigate potential cumulative impacts prior to issuance of building permits.
2. Prepare and process a design exception to cover driveway spacing issues.
3. Pay a fair share amount of $620 per J-25 contribution for the future signalization of the SR-67 & Lakeside Avenue intersection to mitigate potential cumulative impacts to the intersection.
4. Encroachment permits will be required for all work performed within the County right-of-way.
5. Restrict the easterly driveway to "right-turn-only" for traffic exiting the site.

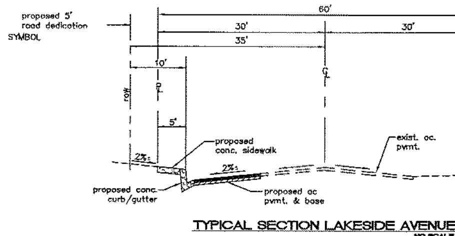
Please feel free to call me if you have questions on any of the above.

Sincerely,

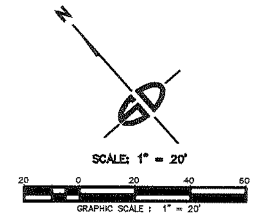
Rick Crafts CE, TE

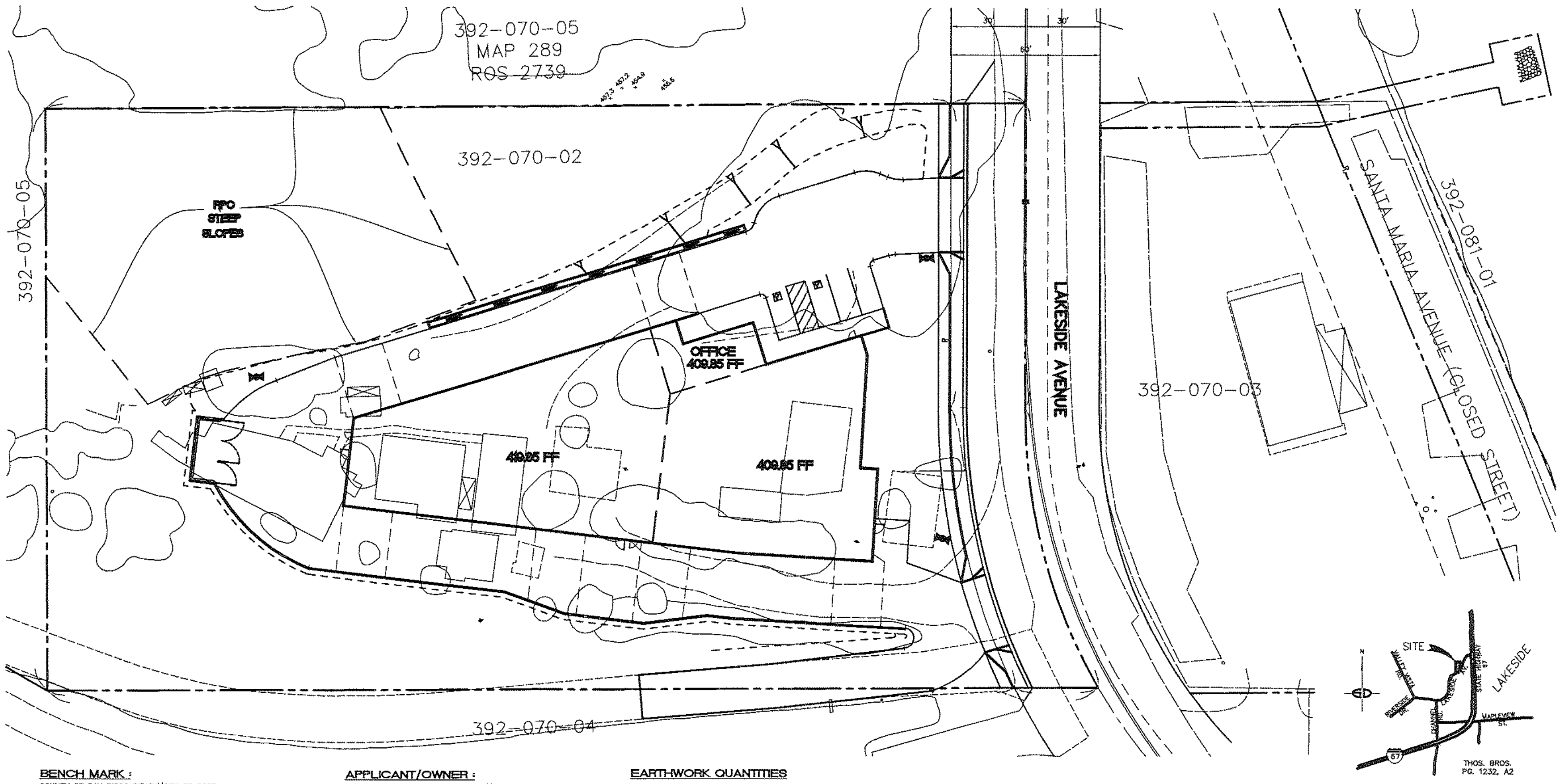
LEGEND :

ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.	SYMBOL
EXISTING CONTOUR			PROPOSED CUT/FILL SLOPE (2:1 MAX)		
PROPOSED CONTOUR	—410—		DIRECTION OF DRAINAGE (1% MIN.)		
PROPOSED SPOT ELEVATION			EDGE OF PAVEMENT		
EXISTING SPOT ELEVATION	x 406.6		CONCRETE PAVEMENT		
BUILDING PERIMETER			A.C. PAVEMENT		
RETAINING WALL			TYPE F CATCH BASIN		
CONCRETE CURB			TYPE B CURB INLET		
CONCRETE CURB/ GUTTER			TYPE A CLEANOUT		
			RCP STORM DRAIN		



TYPICAL SECTION LAKESIDE AVENUE
NO SCALE





VICINITY MAP
NO SCALE

BENCH MARK :
COUNTY OF SAN DIEGO BENCHMARK EC 0207
BRASS DISC IN CONCRETE CURB, 0.4 MILES SOUTHWEST CORNER OF INTERSECTION OF LAKESIDE DR. AND VISTA CAMINO.
ELEVATION = 387.151

SITE ADDRESS :
12410 LAKESIDE AVENUE
LAKESIDE, CA 92040

ASSESSOR PARCEL NUMBER :
392-070-02

APPLICANT/OWNER :
DANUBE PROPERTIES
2055 THIRD AVENUE, SUITE C
SAN DIEGO, CA 92101

MOE ROSENBERG
7770 REGENTS RD. # 113-192
SAN DIEGO, CA 92122-1967
(858) 864-7741

TOPOGRAPHY :
TOPOGRAPHY BY :
SAN-LO AERIAL SURVEYS
1-05

EARTHWORK QUANTITIES

EXCAVATION :	6,800	C.Y.
EMBANKMENT :	0	C.Y.
EXPORT :	6,800	C.Y.

NOTE:
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ENGINEER OF WORK

ENGINEER OF WORK
Snipes-Dye associates
civil engineers and land surveyors
8348 CENTER DRIVE, STE. G, LA MESA, CA 91942
TELEPHONE (619) 697-9234 FAX (619) 460-2033

ROBERT L. BRUCKART R.C.E. 48156
EXPIRES 06-30-08

REGISTERED PROFESSIONAL ENGINEER
ROBERT L. BRUCKART JR.
No. 48156
Exp. 6-30-08
CIVIL
STATE OF CALIFORNIA

SITE PLAN
FIGURE 1

REVISION	BY

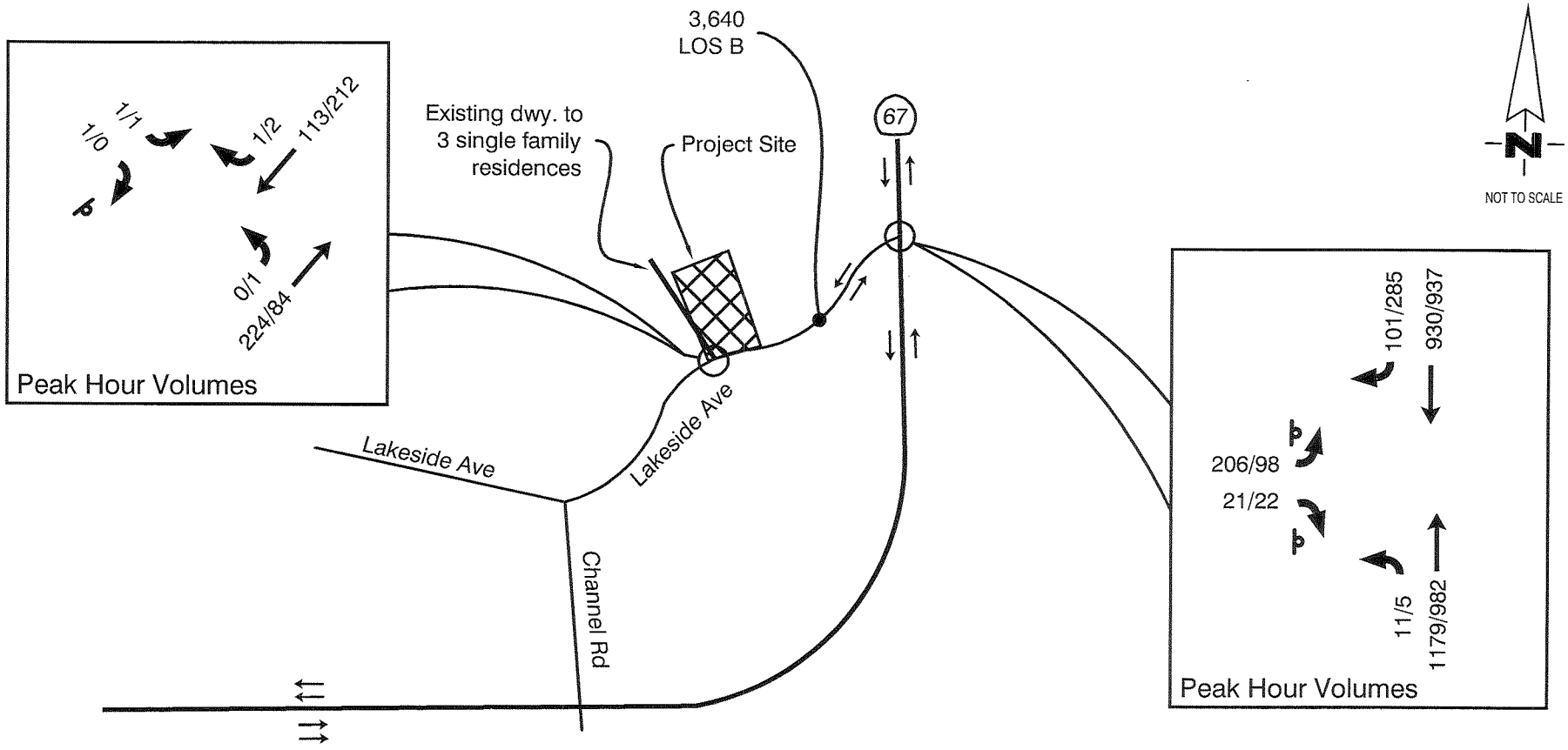
RMI ARCHITECTS
ARCHITECTURE • PLANNING • INTERIOR DESIGN
8330 UNIVERSITY AVENUE (619) 465-2011
LA MESA, CA 91941 FAX: (619) 465-2833
CONTACT: RICK MARRS (619) 465-2011 EXT 13
RICK@RMI-ARCHITECTS.COM

SELF STORAGE
LAKESIDE AVE.

ROUTE 67 STORAGE
OWNER: DANUBE PROPERTIES, INC.
2055 3rd Avenue, Suite 200
San Diego, Ca. 92101 (619) 295-2247 (x224)

PROJECT

DATE: 5-12-08
SCALE: 1"=20'
DRAWN: MH
JOB NO: LK0381
SHEET C1



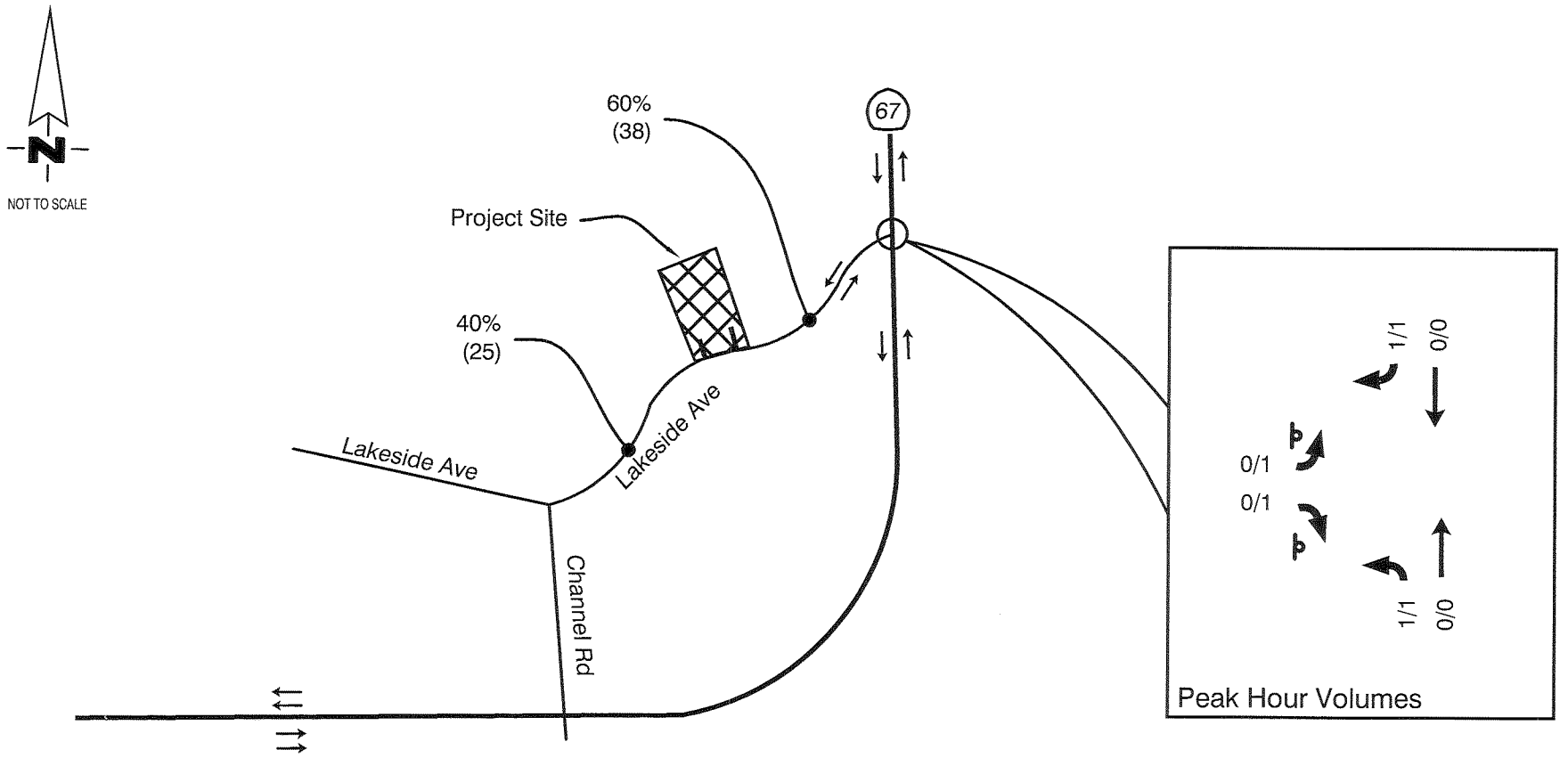
Route 67 Self-Storage

RCE TRAFFIC AND TRANSPORTATION ENGINEERING
9255 DILLON DRIVE
LA MESA, CALIFORNIA 91941
tel. (619) 589-9151 fax (619) 589-9209

EXISTING TRAFFIC VOLUMES

FIGURE 2

37500 exiswting volumes



Route 67 Self-Storage

LEGEND

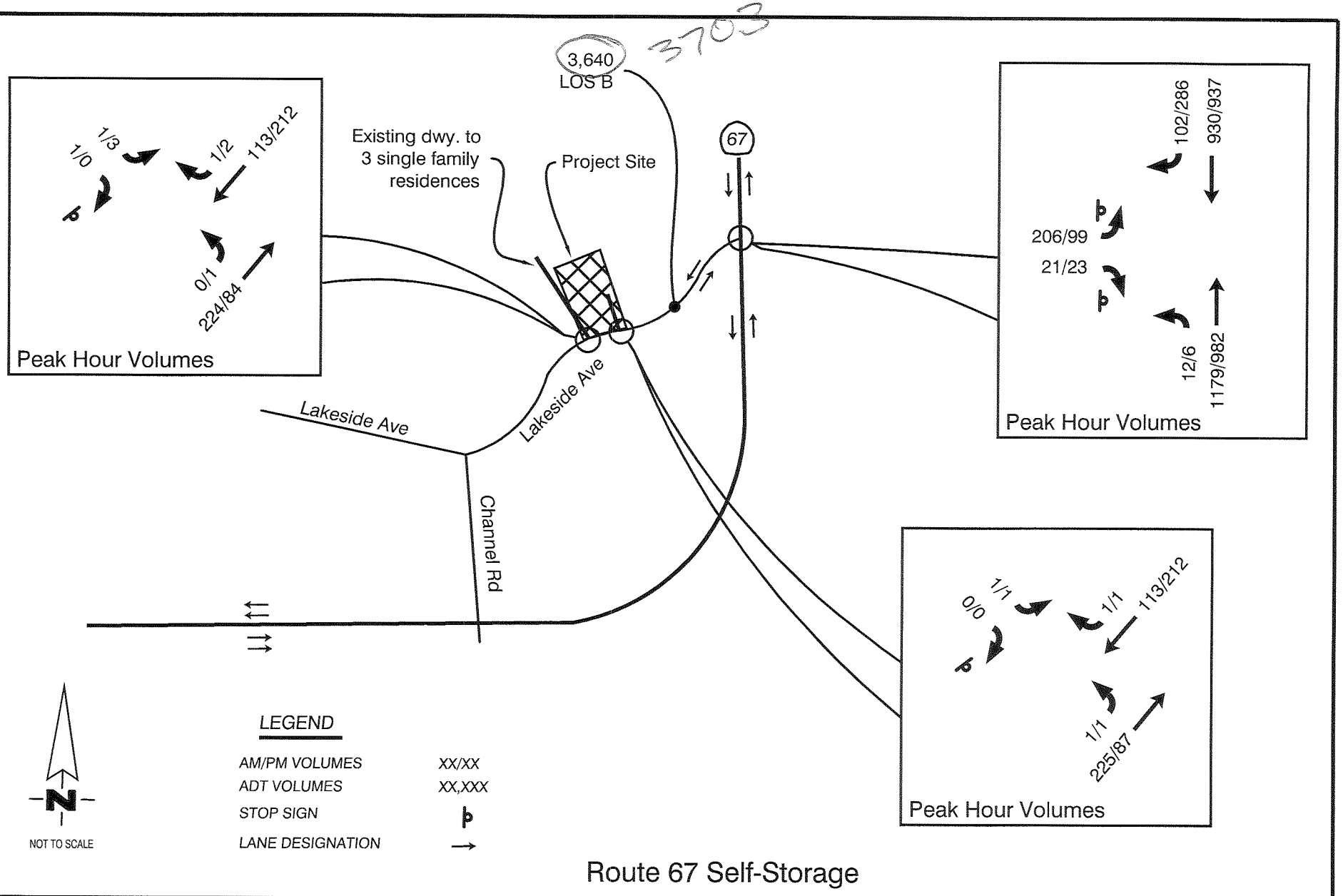
PROJECT AM/PM VOLUMES	*XX/XX*
PROJECT ADT VOLUMES	*(XX)*
PROJECT DISTRIBUTION	*XX%*
STOP SIGN	
LANE DESIGNATION	

RCE TRAFFIC AND TRANSPORTATION ENGINEERING
9255 DILLON DRIVE
LA MESA, CALIFORNIA 91941
tel. (619) 589-9151 fax (619) 589-9209

PROJECT TRIP DISTRIBUTION

FIGURE 3

37500 project distribution



RCE TRAFFIC AND TRANSPORTATION ENGINEERING
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LA MESA, CALIFORNIA 91941
tel. (619) 589-9151 fax (619) 589-9209

EXISTING + PROJECT TRAFFIC VOLUMES

FIGURE 4

37500 exiswting volumes

LEGEND :

ITEM	STD. DWG.	SYMBOL ITEM	STD. DWG.
EXISTING CONTOUR		PROPOSED CUT/FILL SLOPE (2:1 MAX)	
PROPOSED CONTOUR	—410—	DIRECTION OF DRAINAGE (1% MIN.)	
PROPOSED SPOT ELEVATION	429.25	EDGE OF PAVEMENT	
EXISTING SPOT ELEVATION	x 406.6	CONCRETE PAVEMENT	
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RETAINING WALL		TYPE F CATCH BASIN	
CONCRETE CURB		TYPE B CURB INLET	
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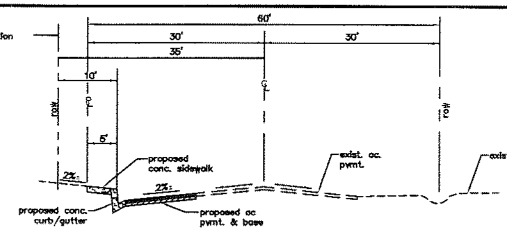

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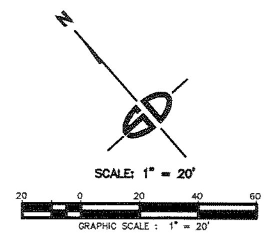

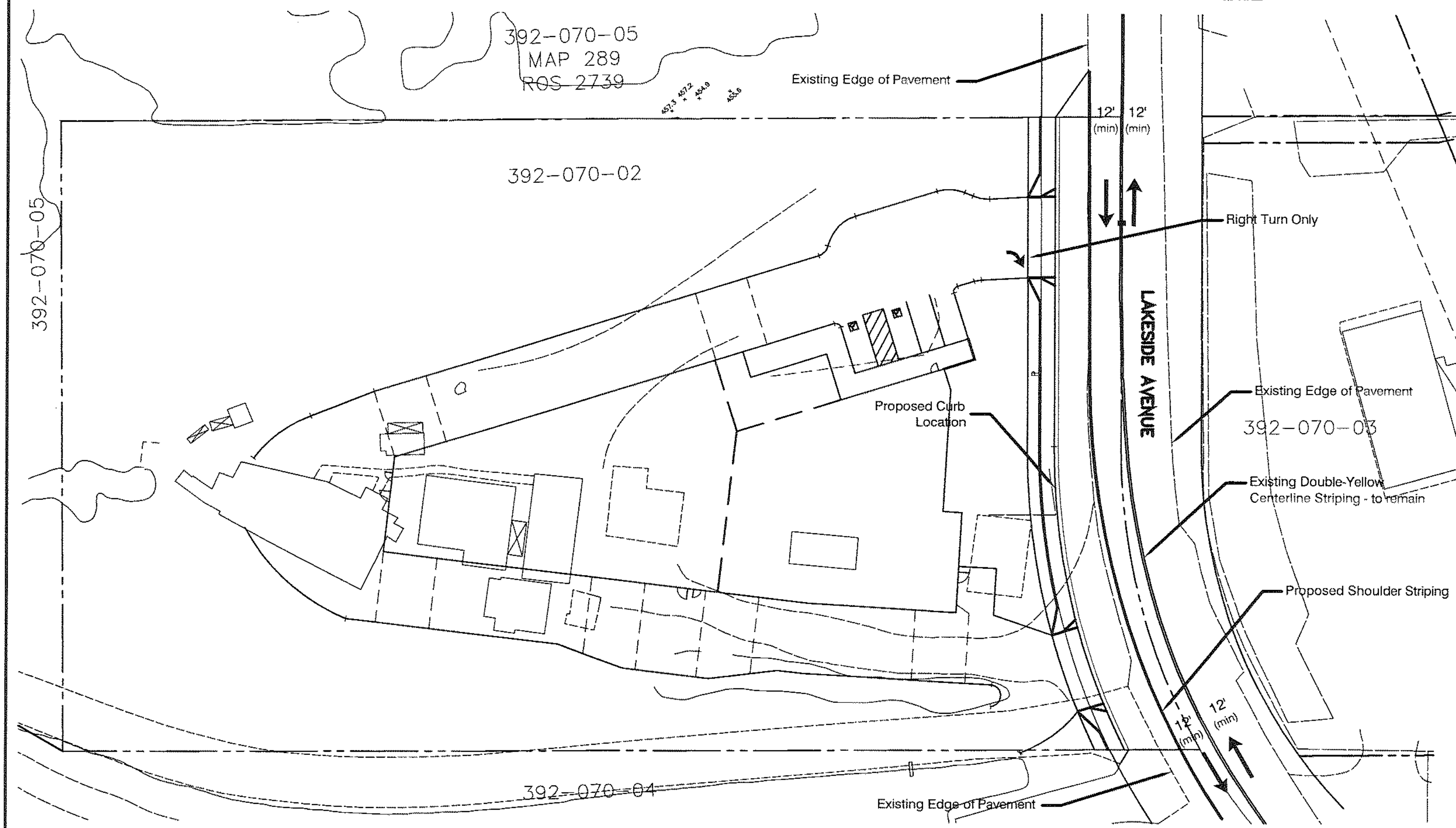

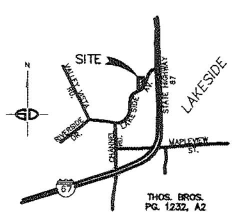

VICINITY MAP
NO SCALE

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BRASS DISC IN CONCRETE CURB, 0.4 MILES SOUTHWEST CORNER OF INTERSECTION OF LAKESIDE DR. AND VISTA CAMINO.
ELEVATION = 387.151

SITE ADDRESS :
12410 LAKESIDE AVENUE
LAKESIDE, CA 92040

ASSESSOR PARCEL NUMBER :
392-070-02

APPLICANT/OWNER :
DANUBE PROPERTIES
2055 THIRD AVENUE, SUITE C
SAN DIEGO, CA 92101

MOE ROSENBERG
7770 REGENTS RD. # 113-192
SAN DIEGO, CA 92122-1967
(858) 864-7741

TOPOGRAPHY :
TOPOGRAPHY BY :
SAN-LO AERIAL SURVEYS
1-05

EARTHWORK QUANTITIES

EXCAVATION :	6,800	C.Y.
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PRELIMINARY STRIPING PLAN
FIGURE 5

REVISION | BY

RMI ARCHITECTS
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8330 UNIVERSITY AVENUE (619) 465-2011
LA MESA, CA 91941 FAX: (619) 465-2833
CONTACT: RICK MARRS (619) 465-2011 EXT 13
RICK@RMI-ARCHITECTS.COM

SELF STORAGE
LAKESIDE AVE.

ROUTE 67 STORAGE
OWNER: DANUBE PROPERTIES, INC.
2055 3rd Avenue, Suite 200
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PROJECT

DATE: 5-12-08
SCALE: 1"-20'
DRAWN: MH
JOB NO: LK0381
SHEET C1

TRAFFIC IMPACT ANALYSIS

APPENDIX

FOR:

SR-67 Self-Storage

APPENDIX A - Traffic Counts

APPENDIX B - Intersection LOS Analysis

APPENDIX A

Traffic Counts

Volumes for: Wednesday, July 11, 2007 City: Lakeside Project #: 07-4141-001

Location: Lakeside Ave w/o SR-67

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	5		8					12:00	12		28				
00:15	5		3					12:15	19		26				
00:30	6		4					12:30	16		18				
00:45	3	19	2	17			36	12:45	17	64	14	86			150
01:00	0		2					13:00	19		21				
01:15	3		1					13:15	27		25				
01:30	1		4					13:30	25		23				
01:45	1	5	3	10			15	13:45	15	86	33	102			188
02:00	1		0					14:00	16		23				
02:15	2		5					14:15	16		36				
02:30	2		7					14:30	15		54				
02:45	1	6	2	14			20	14:45	23	70	36	149			219
03:00	2		1					15:00	17		46				
03:15	3		2					15:15	15		37				
03:30	8		3					15:30	10		54				
03:45	3	16	1	7			23	15:45	19	61	56	193			254
04:00	5		0					16:00	18		57				
04:15	5		1					16:15	27		54				
04:30	9		3					16:30	23		65				
04:45	5	24	3	7			31	16:45	16	84	36	212			296
05:00	12		8					17:00	18		52				
05:15	13		8					17:15	14		38				
05:30	18		10					17:30	12		48				
05:45	28	71	13	39			110	17:45	23	67	40	178			245
06:00	44		12					18:00	26		38				
06:15	44		18					18:15	20		41				
06:30	51		21					18:30	18		38				
06:45	50	189	15	66			255	18:45	16	80	38	155			235
07:00	68		19					19:00	14		21				
07:15	52		32					19:15	23		23				
07:30	59		27					19:30	18		18				
07:45	45	224	35	113			337	19:45	9	64	15	77			141
08:00	51		27					20:00	14		12				
08:15	30		26					20:15	15		16				
08:30	35		25					20:30	20		16				
08:45	23	139	27	105			244	20:45	15	64	15	59			123
09:00	30		22					21:00	14		12				
09:15	21		18					21:15	16		13				
09:30	25		21					21:30	13		13				
09:45	19	95	12	73			168	21:45	14	57	10	48			105
10:00	18		17					22:00	14		16				
10:15	19		12					22:15	7		6				
10:30	23		22					22:30	9		8				
10:45	20	80	21	72			152	22:45	6	36	7	37			73
11:00	16		27					23:00	7		5				
11:15	19		25					23:15	2		7				
11:30	13		23					23:30	1		9				
11:45	25	73	33	108			181	23:45	4	14	4	25			39
Total Vol.		941		631			**1572**			747		1321			**2068**

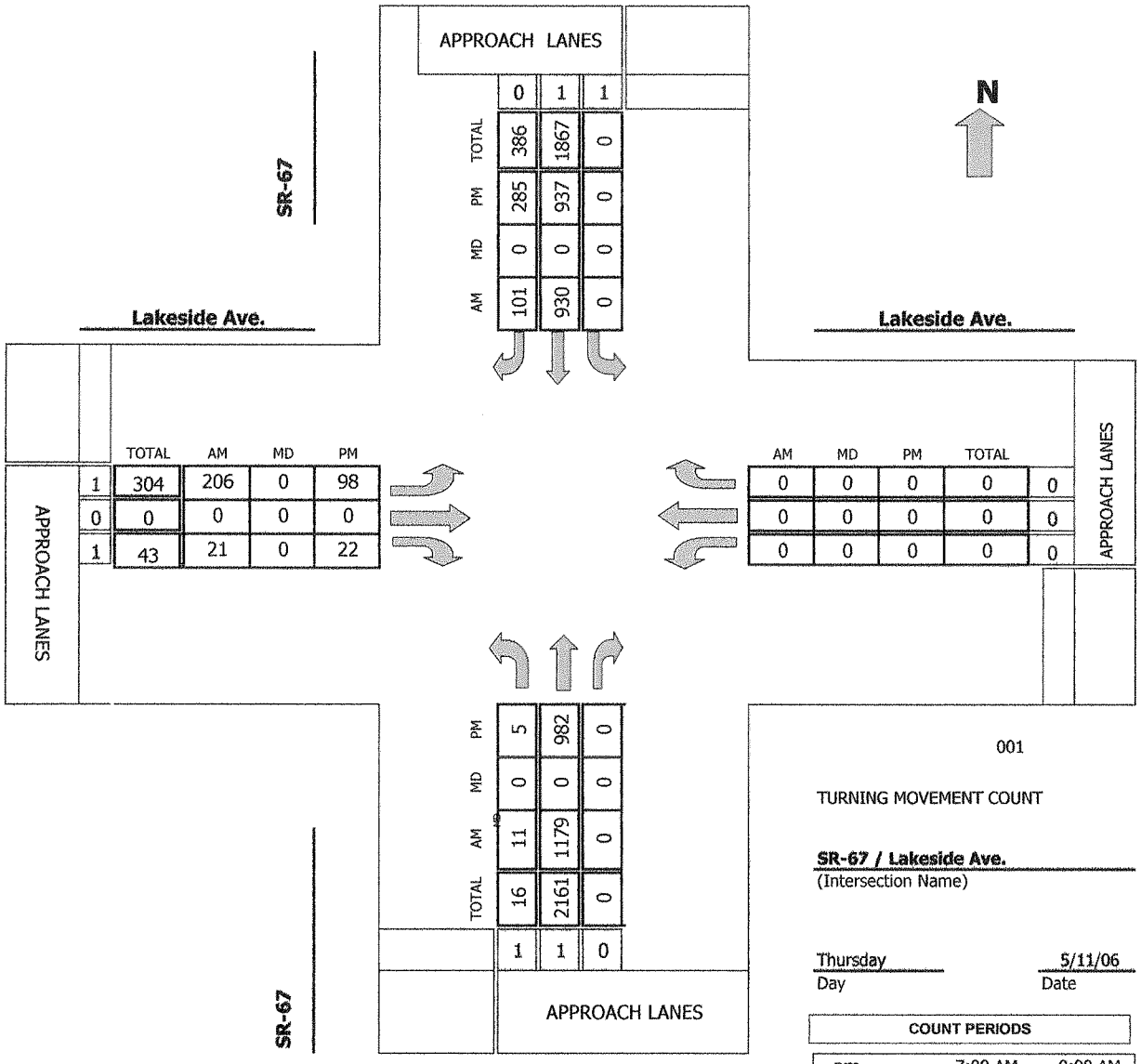
Daily Totals

NB	SB	EB	WB	Combined
1688	1952			**3640**

	AM			PM		
Split %	59.9%	40.1%	**43.2%**	36.1%	63.9%	**56.8%**
Peak Hour	06:45	07:15	**07:00**	12:45	15:45	**15:45**
Volume	229	121	**337**	88	232	**319**
P.H.F.	0.84	0.86	**0.97**	0.83	0.89	**0.91**

TMC Summary of SR-67/Lakeside Ave.

Project #: 06-3199-007



001

TURNING MOVEMENT COUNT

SR-67 / Lakeside Ave.
(Intersection Name)

Thursday — Day
5/11/06 — Date

COUNT PERIODS			
am	7:00 AM	-	9:00 AM
noon	4:00 PM	-	6:00 PM
pm	4:00 PM	-	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: SR-67 DATE: 5/11/2006 LOCATION: City of Lakeside

E-W STREET: Lakeside Ave. DAY: THURSDAY PROJECT# 06-3199-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	1	1	0	1	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	3	233			164	15	23		3				441
7:15 AM	4	240			169	17	26		4				460
7:30 AM	3	269			175	21	37		6				511
7:45 AM	1	309			223	26	52		8				619
8:00 AM	3	300			230	24	57		7				621
8:15 AM	4	296			246	27	55		4				632
8:30 AM	3	274			231	24	42		2				576
8:45 AM	6	249			192	19	33		1				500
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	27	2170	0	0	1630	173	325	0	35	0	0	0	4360

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	11	1179	0	0	930	101	206	0	21	0	0	0	2448
PEAK HR. FACTOR:		0.960			0.944			0.887			0.000		0.968

CONTROL: 1-Way Stop E

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: SR-67 DATE: 5/11/2006 LOCATION: City of Lakeside

E-W STREET: Lakeside Ave. DAY: THURSDAY PROJECT# 06-3199-007

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	1	1	0	1	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3	205			162	39	19		2				430
4:15 PM	2	230			180	51	21		2				486
4:30 PM	3	247			220	63	29		3				565
4:45 PM	3	252			219	75	31		7				587
5:00 PM	1	243			230	69	25		6				574
5:15 PM	0	246			242	74	18		3				583
5:30 PM	1	241			246	67	24		6				585
5:45 PM	3	230			221	57	20		4				535
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL VOLUMES =	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	16	1894	0	0	1720	495	187	0	33	0	0	0	4345

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	5	982	0	0	937	285	98	0	22	0	0	0	2329
PEAK HR. FACTOR:		0.968			0.967			0.789			0.000		0.992

CONTROL: 1-Way Stop E

APPENDIX B

Level of Service Calculations

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: AM - Existing
Intersection: Lakeside & SR 67
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID:
East/West Street: Lakeside
North/South Street: SR-67
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	11	1179			930	101
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	11	1179			930	101
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						Yes
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				206		21
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				206		21
Percent Heavy Vehicles				15		15
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	11					206		21
C(m) (vph)	685					172		307
v/c	0.02					1.20		0.07
95% queue length	0.05					11.17		0.22
Control Delay	10.3					185.6		17.6
LOS	B					F		C
Approach Delay							170.0	
Approach LOS							F	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: AM - Existing + Project
Intersection: Lakeside & SR 67
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: SR-67
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	12	1179			930	102
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	12	1179			930	102
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						Yes
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				206		21
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				206		21
Percent Heavy Vehicles				15		15
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	12					206		21
C(m) (vph)	685					171		307
v/c	0.02					1.20		0.07
95% queue length	0.05					11.24		0.22
Control Delay	10.3					188.4		17.6
LOS	B					F		C
Approach Delay							172.6	
Approach LOS							F	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: PM - Existing
Intersection: Lakeside & SR 67
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: SR-67
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	5	982			937	285
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	5	982			937	285
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						Yes
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				98		22
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				98		22
Percent Heavy Vehicles				15		15
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	5					98		22
C(m) (vph)	681					296		304
v/c	0.01					0.33		0.07
95% queue length	0.02					1.41		0.23
Control Delay	10.3					23.1		17.8
LOS	B					C		C
Approach Delay							22.1	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: PM - Existing + Project
Intersection: Lakeside & SR 67
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: SR-67
Intersection Orientation: NS Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	6	982			937	286
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	6	982			937	286
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						Yes
Lanes	1	1			1	1
Configuration	L	T			T	R
Upstream Signal?		Yes			No	

Minor Street: Approach	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				99		23
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				99		23
Percent Heavy Vehicles				15		15
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	6					99		23
C(m) (vph)	681					295		304
v/c	0.01					0.34		0.08
95% queue length	0.03					1.43		0.24
Control Delay	10.3					23.2		17.8
LOS	B					C		C
Approach Delay							22.2	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: AM - Existing
Intersection: Lakeside & West driveway
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: west driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	224			113	1
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	0	224			113	1
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1	0	1
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				1	0	1
Percent Heavy Vehicles				30	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
v (vph)	0						2	
C(m) (vph)	1399						737	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.6						9.9	
LOS	A						A	
Approach Delay							9.9	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:	RC
Agency/Co.:	RCE
Date Performed:	5/22/08
Analysis Time Period:	AM Existing + Project
Intersection:	Lakeside & West driveway
Jurisdiction:	County of San Diego
Units: U. S. Customary	
Analysis Year:	2007
Project ID: SR-67 SELF STORAGE	
East/West Street:	Lakeside
North/South Street:	west driveway
Intersection Orientation: EW	Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	224			113	1
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	0	224			113	1
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1	0	1
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				1	0	1
Percent Heavy Vehicles				30	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
v (vph)	0						2	
C(m) (vph)	1399						737	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.6						9.9	
LOS	A						A	
Approach Delay							9.9	
Approach LOS							A	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: PM - Existing
Intersection: Lakeside & West driveway
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: west driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	84			212	2
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	1	84			212	2
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1	0	0
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				1	0	0
Percent Heavy Vehicles				30	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
v (vph)	1						1	
C(m) (vph)	1285						638	
v/c	0.00						0.00	
95% queue length	0.00						0.00	
Control Delay	7.8						10.7	
LOS	A						B	
Approach Delay							10.7	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: PM - Existing + project
Intersection: Lakeside & West driveway
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: west driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	84			212	2
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	1	84			212	2
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3	0	0
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				3	0	0
Percent Heavy Vehicles				30	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
v (vph)	1						3	
C(m) (vph)	1285						638	
v/c	0.00						0.00	
95% queue length	0.00						0.01	
Control Delay	7.8						10.7	
LOS	A						B	
Approach Delay							10.7	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: AM - Peak
Intersection: Lakeside & East driveway
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year:
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: east driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	225			113	1
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	1	225			113	1
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1	0	0
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				1	0	0
Percent Heavy Vehicles				30	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
v (vph)	1						1	
C(m) (vph)	1399						602	
v/c	0.00						0.00	
95% queue length	0.00						0.00	
Control Delay	7.6						11.0	
LOS	A						B	
Approach Delay							11.0	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: RC
Agency/Co.: RCE
Date Performed: 5/22/08
Analysis Time Period: PM - Peak
Intersection: Lakeside & East driveway
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: SR-67 SELF STORAGE
East/West Street: Lakeside
North/South Street: east driveway
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	87				1
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	1	87			113	1
Percent Heavy Vehicles	15	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration		LT				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1	0	0
Peak Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				1	0	0
Percent Heavy Vehicles				30	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
v (vph)	1						1	
C(m) (vph)	1399						725	
v/c	0.00						0.00	
95% queue length	0.00						0.00	
Control Delay	7.6						10.0-	
LOS	A						A	
Approach Delay							10.0-	
Approach LOS							A	